CURRENT LISTING OF THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1   1.   (Previously Presented) A method for internet protocol (IP) address selection, comprising
2   the steps of:
3   assigning a single domain name to a set of server IP addresses corresponding to plural
4   servers;
5   receiving a request for the domain name from a client IP address;
6   retrieving a set of IP routes linking the server IP addresses and the client IP address; and
7   selecting an IP route from the set of routes which meets predetermined criteria.

1   2.   (Original) The method of claim 1 wherein the retrieving step includes the step of:
2   retrieving the set of IP routes from a cache database.

1   3.   (Original) The method of claim 1 wherein the retrieving step includes the step of:
2   retrieving the set of IP routes from an IP routes database.

1   4.   (Original) The method of claim 1 wherein the retrieving step includes the step of:
2   retrieving the set of IP routes from a set of routers using a BGP protocol.

1   5.   (Original) The method of claim 1 wherein the retrieving step includes the step of:
2   retrieving the set of IP routes from a set of routers using an SNMP (MIB retrieval)
3   protocol.

1   6.   (Original) The method of claim 1 wherein the retrieving step includes the step of:
2   retrieving the set of IP routes from a set of routers using a Telnet protocol.

1   7.   (Original) The method of claim 1 wherein the selecting step includes the step of:
2   selecting the IP route from the set which has a shortest AS path.

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1   8.   (Original) The method of claim 1 wherein the selecting step includes the step of:

2   selecting the IP route from the set which has a lowest origin type.

1   9.   (Original) The method of claim 1 wherein the selecting step includes the step of:

2   selecting the IP route from the set which has a lowest MED.

1   10. (Original) The method of claim 1 wherein the selecting step includes the step of:

2   selecting the IP route from the set equal to a default IP address.

1   11. (Original) The method of claim 1 further comprising the step of:

2   storing the IP routes in a cache database.

1   12. (Original) The method of claim 1 further comprising the step of:

2   storing the IP routes in an IP routes database.

1   13. (Original) The method of claim 1 further comprising the step of:

2   defining an enhanced address resource record, including a domain name, a list of

3   corresponding servers and routers, router retrieval parameters, a default client/server IP route,

4   and timeouts.

1   14. (Original) The method of claim 1 further comprising the step of:

2   transmitting an IP address from the set of server IP addresses which corresponds to the

3   selected IP route.

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1   15.   (Previously Presented) A computer-usable medium embodying computer program code

2   for commanding a computer to perform internet protocol address selection, comprising the steps

3   of:

4   assigning a single domain name to a set of server IP addresses corresponding to plural

5   servers;

6   receiving a request for the domain name from a client IP address;

7   retrieving a set of IP routes linking the server IP addresses and the client IP address; and

8   selecting an IP route from the set of routes which meets predetermined criteria.

1   16.   (Original) The computer-usable medium of claim 15 wherein the retrieving step includes

2   the step of:

3   retrieving the set of IP routes from a cache database.

1   17.   (Original)- The computer-usable medium of claim 15 wherein the retrieving step includes

2   the step of:

3   retrieving the set of IP routes from a set of routers using a BGP protocol.

1   18.   (Original) The computer-usable medium of claim 15 wherein the retrieving step includes

2   the step of:

3   retrieving the set of IP routes from a set of routers using an SNMP (MIB retrieval)

4   protocol.

1   19.   (Original) The computer-usable medium of claim 15 wherein the retrieving step includes

2   the step of:

3   retrieving the set of IP routes from a set of routers using a Telnet protocol.

1   20.   (Original) The computer-usable medium of claim 15 wherein the selecting step includes

2   the step of:

3   selecting the IP route from the set which has a shortest AS path.

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1   21.   (Original) The computer-usable medium of claim 15 wherein the selecting step includes

2   the step of:

3   selecting the IP route from the set which has a lowest origin type.

1   22.   (Original) The computer-usable medium of claim 15 wherein the selecting step includes

2   the step of:

3   selecting the IP route from the set which has a lowest MED.

1   23.   (Original) The computer-usable medium of claim 15 wherein the selecting step includes

2   the step of:

3   selecting the IP route from the set equal to a default IP address.

1   24.   (Original) The computer-usable medium of claim 15 further comprising the step of:

2   transmitting an IP address from the set of server IP addresses which corresponds to the

3   selected IP route.

1   25.   (Previously Presented) A system for internet protocol (IP) address selection comprising:

2   a set of servers, having a single domain name;

3   a client computer;

4   a set of routers, coupled to the servers and the client computer, for storing IP routes

5   between the servers and the client; and

6   a domain name system server, coupled to the routers, for downloading the IP routes from

7   the routers for storage in an IP routes database, and, in response to a query containing the domain

8   name received from the client computer, selecting one of the IP routes contained in the IP routes

9   database which meets predetermined criteria.

1   26.   (Original) The system of claim 25 further comprising:

2   a cache database, coupled to the domain name system server, for storing previously

3   selected IP routes.

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1 27.   (Previously Presented) The system of claim 25, wherein the IP routes database is for

2 storing all of the IP routes.

1 28.   (Original) The system of claim 25 wherein:

2   the domain name system server includes an enhanced address resource record storing the

3 single domain name, a list of the servers and routers, a set of router retrieval parameters, a

4 default IP route, and timeouts; and

5   the domain name system server accesses the retrieval parameters in order to select the IP

6 routes.

1 29.   (Previously Presented) The method of claim 1, wherein the client IP address corresponds

2 to a client, wherein the set of IP routes comprises IP routes from the client to the respective

3 plural servers, and

4   wherein selecting the IP route comprises selecting the IP route corresponding to the

5 server that satisfies the predetermined criteria.

1 30.   (Previously Presented) The method of claim 1, wherein the client IP address corresponds

2 to a client, wherein the set of IP routes comprises IP routes from the client to the respective

3 plural servers, and

4   wherein selecting the IP route comprises selecting the IP route to the server associated

5 with a shortest path from the client.

1 31.   (Previously Presented) The method of claim 1, wherein the assigning, receiving,

2 retrieving, and selecting acts are performed by a domain name system (DNS) server.

1 32.   (Previously Presented) The method of claim 31, wherein retrieving the set of IP routes

2 comprises retrieving a set of IP routes information relating to the IP routes, where each IP route

3 information is defined by at least two IP addresses.

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1   33.   (Previously Presented) The method of claim 31, further comprising:

2   prior to retrieving the set of IP routes, checking a database in a cache to find an IP route

3   entry containing an IP route previously indicated as being a best IP route; and

4   in response to finding the IP route entry in the cache, using the IP route previously

5   indicated as being the best IP route as the selected IP route.

1   34.   (Previously Presented) The method of claim 33, wherein retrieving the set of IP routes is

2   performed from an IP routes database, and wherein retrieving the set of IP routes from the IP

3   routes database is in response to determining that the IP route entry is not present in the cache.

1   35.   (Previously Presented) The method of claim 31, further comprising:

2   accessing a field in a record, the field to indicate one of plural techniques for

3   downloading IP routes from routers to the DNS server; and

4   based on the technique identified by the field, establishing one or more sessions with the

5   routers to download IP routes from the routers into an IP routes database in the DNS server,

6   wherein retrieving the set of IP routes is performed from the IP routes database.

1   36.   (Previously Presented) The method of claim 35, wherein establishing the one or more

2   sessions with the routers comprises establishing one or more Border Gateway Protocol (BGP)

3   sessions with the routers to download IP routes from the routers into the IP routes database, in

4   response to the field indicating use of BGP retrieval.

1   37.   (Previously Presented) The method of claim 36, wherein establishing the one or more

2   sessions with the routers comprises establishing one or more Simple Network Management

3   Protocol (SNMP) sessions with the routers to download IP routes from the routers into the IP

4   routes database, in response to the field indicating use of Management Information Base (MIB)

5   retrieval.

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1   38.   (Previously Presented) The method of claim 37, wherein establishing the one or more

2   sessions with the routers comprises establishing one or more Telnet sessions with the routers to

3   download IP routes from the routers into the IP routes database, in response to the field

4   indicating use of Telnet retrieval.

1   39.   (Previously Presented) The method of claim 35, wherein establishing the one or more

2   sessions with the routers comprises establishing one of plural different types of sessions

3   corresponding to the one of plural techniques specified by the field to download IP routes from

4   the routers into the IP routes database.

1   40.   (Previously Presented) The computer-usable medium of claim 15, wherein the client IP

2   address corresponds to a client, wherein the set of IP routes comprises IP routes from the client

3   to the respective plural servers, and

4   wherein selecting the IP route comprises selecting the IP route corresponding to the

5   server that satisfies the predetermined criteria.

1   41.   (Previously Presented) The computer-usable medium of claim 15, wherein the client IP

2   address corresponds to a client, wherein the set of IP routes comprises IP routes from the client

3   to the respective plural servers, and

4   wherein selecting the IP route comprises selecting the IP route to the server associated

5   with a shortest path from the client.

1   42.   (Previously Presented) The computer-usable medium of claim 15, wherein retrieving the

2   set of IP routes comprises retrieving a set of IP routes information, where each IP route

3   information is defined by at least two IP addresses.

1   43.   (Previously Presented) The computer-usable medium of claim 15, wherein retrieving the

2   set of IP routes is performed from an IP routes database.

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1   44.   (Previously Presented) The computer-usable medium of claim 43, wherein the computer

2   program code commands the computer to further:

3   access a field in a record, the field to indicate one of plural techniques for downloading

4   IP routes from routers to the computer; and

5   based on the technique identified by the field, establish one or more sessions with the

6   routers to download IP routes from the routers into the IP routes database in the computer.

1   45.   (Previously Presented) The computer-usable medium of claim 44, wherein establishing

2   the one or more sessions with the routers comprises establishing one or more Border Gateway

3   Protocol (BGP) sessions with the routers to download IP routes from the routers into the IP

4   routes database, in response to the field indicating use of BGP retrieval.

1   46.   (Previously Presented) The computer-usable medium of claim 44, wherein establishing

2   the one or more sessions with the routers comprises establishing one or more Simple Network

3   Management Protocol (SNMP) sessions with the routers to download IP routes from the routers

4   into the IP routes database, in response to the field indicating use of Management Information

5   Base (MIB) retrieval.

1   47.   (Previously Presented) The computer-usable medium of claim 44, wherein establishing

2   the one or more sessions with the routers comprises establishing one or more Telnet sessions

3   with the routers to download IP routes from the routers into the IP routes database, in response to

4   the field indicating use of Telnet retrieval.

1   48.   (Previously Presented) The computer-usable medium of claim 44, wherein establishing

2   the one or more sessions with the routers comprises establishing one of plural different types of

3   sessions corresponding to the one of plural techniques specified by the field to download IP

4   routes from the routers into the IP routes database.

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1   49.   (Previously Presented) The system of claim 25, wherein the domain name system server

2   is adapted to:

3   access a record containing a field that specifies use of plural techniques for establishing

4   sessions with the routers for downloading the IP routes; and

5   establishing one of plural different types of sessions corresponding to the one of plural

6   techniques specified by the field to download the IP routes from the routers into the IP routes

7   database.

1   50.   (Previously Presented) The system of claim 49, wherein the plural different types of

2   sessions comprise Border Gateway Protocol (BGP) sessions, Simple Network Management

3   Protocol (SNMP) sessions, and Telnet sessions.

1   51.   (Previously Presented) The system of claim 25, wherein the domain name system server

2   selects the IP routes corresponding to the server that satisfies the predetermined criteria.

1   52.   (Previously Presented) The system of claim 25, wherein the domain name system server

2   selects the IP route to the server with a shortest path from the client computer, the predetermined

3   criteria comprising a shortest path criterion.

1   53.   (Previously Presented) The system of claim 25, wherein the set of servers having the

2   single domain name are associated with plural respective server IP addresses, wherein the client

3   has a client IP address, and

4   wherein the IP routes downloaded to the IP routes database are defined by the client IP

5   address and the plural respective server IP addresses.

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